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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,596	05/17/2004	David B. Riggs	FIS920010074	3595

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EXAMINER	
MARKOFF, ALEXANDER	
ART UNIT	PAPER NUMBER
1792	

MAIL DATE	DELIVERY MODE
06/27/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/709,596	RIGGS ET AL.	
	Examiner	Art Unit	
	Alexander Markoff	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,6,7 and 10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3, 4, 6, 7 and 10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 3, 4, 6, 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the state of the prior art admitted by the applicants in view of any one of Giedd (US Patent No 6,489,616) and Chang et al (US Patent No 4,144,634).

The applicants admitted in the specification that it was known in the art that control of the dopant ions is critical for the device performance and that diffusion of the ions into undesired areas (including the claimed areas) can damage the device (part [0008]). The applicants further admitted that conventional cleaning methods conducted at different stages of the manufacturing comprise heating and rinsing the substrates (parts [0009-0013]).

Giedd and Chang et al teach that removing dopant ions with the solvents as claimed was conventional in the art (at least column 16, lines 6-11 of Giedd and column 5, line 41-44 of Chang et al).

It would have been obvious to an ordinary artisan at the time the invention was made to utilize cleaning of dopant ions disclosed by Giedd and Chang et al as conventional for it's conventional purpose to remove dopant ions from undesired areas in the prior processes disclosed by the admitted prior art with reasonable expectation of success in order to prevent damage of the devices by the ions in undesired areas.

Response to Arguments

5. Applicant's arguments filed 3/18/08 have been fully considered but they are not persuasive. The applicants amended claim 1 to recite the specific surface of the semiconductor material. The referenced limitation was previously considered with respect to cancelled claim 2.

The applicants allege that the rejection is not proper.

The examiner disagrees.

The admitted prior art teaches that it was known in the art that control of the dopant ions is critical for the device performance and that diffusion of the ions into undesired areas (including the claimed areas) can damage the device (part [0008]).

Giedd and Chang et al teach that removing dopant ions with the solvents as claimed was conventional in the art (at least column 16, lines 6-11 of Giedd and column 5, line 41-44 of Chang et al).

The examiner's position is that it would have been have been obvious to an ordinary artisan at the time the invention was made to utilize cleaning of dopant ions disclosed by Giedd and Chang et al as conventional for it's conventional purpose to remove dopant ions from undesired areas in the prior processes disclosed by the admitted prior art with reasonable expectation of success in order to prevent damage of the devices by the ions in undesired areas.

It would have been obvious to an ordinary artisan at the time the invention was made to use a known solution for a known problem.

It is noted that the examiner never stated that Giedd and Chang et al teach removing the dopant ions from the claimed regions or surfaces. The rejection was not made over Giedd and Chang et al alone. The claims were not rejected as anticipated by Giedd or Chang et al. The teaching of the referenced documents was used to show that removing dopant ions with the solvents as claimed was conventional in the art.

Whether or not Giedd and Chang et al teach removing the dopant ions from the claimed areas or surfaces, they teach a technique to remove dopant ions. It would have been obvious to an ordinary artisan at the time the invention was made to use the disclosed technique for the disclosed purpose with reasonable expectation of success.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Markoff whose telephone number is 571-272-1304. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alexander Markoff
Primary Examiner
Art Unit 1792

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